

Computer Science and Business Administration, BS (Oakland)

The computer science and business administration combined major delivers a technical degree with a strong grounding in business. Students will complete most of the requirements of a business major, including macroeconomics and microeconomics, while also focusing on technical skills like program design, software development, computer organization, systems and networks, theories of computation, principles of languages, and advanced algorithms and data.

Program Requirements

Complete all courses listed below unless otherwise indicated. Also complete any corequisite labs, recitations, clinicals, or tools courses where specified and complete any additional courses needed beyond specific college and major requirements to satisfy graduation credit requirements.

Universitywide Requirements

All undergraduate students are required to complete the Universitywide Requirements (<https://catalog.northeastern.edu/undergraduate/university-academics/university-wide-requirements/>).

NUPath Requirements

All undergraduate students are required to complete the NUPath Requirements (<https://catalog.northeastern.edu/undergraduate/university-academics/nupath/>).

Computer Science Courses

Code	Title	Hours
Computer Science Overview		
Must be taken in alignment with your home college:		
CS 1200 or BUSN 1102	First Year Seminar Personal Skill Development for Business	1
CS 1210 or BUSN 1103	Professional Development for Khoury Co-op Professional Development for Business Co-op	1
Computer Science Fundamental Courses		
All students can take a self-assessment to attempt to place out of CS 2000 and CS 2001. Students who place out of CS 2000 and CS 2001 will instead substitute 4-5 semester hours of CS, CY, or DS coursework at the 3000 level or higher not otherwise required in the degree.		
CS 1800 and CS 1802	Discrete Structures and Seminar for CS 1800	5
CS 2000 and CS 2001	Introduction to Program Design and Implementation and Lab for CS 2000	5
CS 2100 and CS 2101	Program Design and Implementation 1 and Lab for CS 2100	5
Computer Science Required Courses		
CS 3000	Algorithms and Data	4
CS 3100 and CS 3101	Program Design and Implementation 2 and Lab for CS 3100	5
CS 3200	Introduction to Databases	4
CS 4530 or CS 4535	Fundamentals of Software Engineering Professional Practicum Capstone	4
Computer Science Required Electives		
Complete two of the following:		8
CS 3650	Computer Systems	
CS 4700	Network Fundamentals	
CS 4730	Distributed Systems	
DS 4300	Large-Scale Information Storage and Retrieval	
Khoury Elective		
With advisor approval, directed study, research, project study, and appropriate graduate-level courses may also be taken as upper-division electives.		
Complete 4 semester hours from within the following options:		4
CS 2500 or higher, except CS 5010		
CY 2000 or higher, except CY 4930		

DS 2500 or higher, except DS 4900

MKTG 4606 Digital, Analytics, Technology, and Automation Research Practicum

Business Courses

Code	Title	Hours
Required Business Courses		
ACCT 1201	Financial Accounting and Reporting	4
ACCT 2301	Profit Analysis for Managers and Advisors	4
FINA 2201	Financial Management	4
MGSC 2301	Business Statistics	4
MKTG 2201	Introduction to Marketing	4
ORGB 3201	Organizational Behavior	4
or ORGB 3203	Behavioral Aspects of Digital Transformation	
STRT 4501	Strategy in Action	4

Business Concentration

Complete a business concentration from the following list.

- Entrepreneurial Startups (<https://catalog.northeastern.edu/undergraduate/business/concentrations/entrepreneurial-startups/>)
- Finance (<https://catalog.northeastern.edu/undergraduate/business/concentrations/finance/>)
- Fintech (<https://catalog.northeastern.edu/undergraduate/business/concentrations/fintech/>)
- Marketing (<https://catalog.northeastern.edu/undergraduate/business/concentrations/marketing/>)
- Social Innovation and Entrepreneurship (<https://catalog.northeastern.edu/undergraduate/business/concentrations/social-innovation-entrepreneurship/>)

Integrative Course

Code	Title	Hours
Information Resource Management		
MISM 2301	Introduction to Information Systems and Digital Technologies	4

Supporting Courses

Code	Title	Hours
Mathematics		
Complete one of the following. MATH 1231 or MATH 1341 is strongly recommended for this major:		4
MATH 1231	Calculus for Business and Economics	
MATH 1241	Calculus 1	
MATH 1245	Calculus with Applications	
MATH 1251	Calculus and Differential Equations for Biology 1	
MATH 1340	Intensive Calculus for Engineers	
MATH 1341	Calculus 1 for Science and Engineering	
Economics		
ECON 1115	Principles of Macroeconomics	4
ECON 1116	Principles of Microeconomics	4
Computing and Social Issues		
Complete one of the following:		4
AFCS 2600	Issues in Race, Science, and Technology	
CY 4170	The Law, Ethics, and Policy of Data and Digital Technologies	
CY 5240	Cyberlaw: Privacy, Ethics, and Digital Rights	
DS 1300	Knowledge in a Digital World	
or PHIL 1300	Knowledge in a Digital World	
HIST 2220	History of Technology	
INSH 2102	Bostonography: The City through Data, Texts, Maps, and Networks	
JRNL 3700	Data Storytelling	
PHIL 1145	Technology and Human Values	
SOCL 1280	The Twenty-First-Century Workplace	

SOCL 2485	Environment, Technology, and Society
SOCL 4528	Technology and Society

Computer Science Writing Requirement

Code	Title	Hours
College Writing		
ENGW 1111	First-Year Writing	4
Advanced Writing in the Disciplines		
ENGW 3302	Advanced Writing in the Technical Professions	4
or ENGW 3315	Interdisciplinary Advanced Writing in the Disciplines	
or ENGW 3304	Advanced Writing in the Business Administration Professions	

Required General Electives

Code	Title	Hours
Complete 16 semester hours of general electives.		16

Business Experiential Learning

Code	Title	Hours
Complete at least one of the following experiences:		
BUSN 4945	In-the-Field Experiential Professional Practicum	
COOP 3945	Co-op Work Experience	
COOP 3946	Co-op Work Experience—Half Time	
COOP 3947	Co-op Work Experience Abroad—Half Time	
COOP 3948	Co-op Work Experience Abroad	
EEBA 2945	Internship Experience	
EEBA 2948	Internship Experience Abroad	

Khoury College GPA Requirement

Minimum cumulative 2.000 GPA required in all CS, CY, DS, and IS courses

Business GPA Requirement

Minimum 2.000 GPA required in business courses

NUpath Requirements Satisfied

- Advanced Writing in the Disciplines
- Analyzing and Using Data
- Conducting Formal and Quantitative Reasoning
- Demonstrating Thought and Action in a Capstone
- Engaging with the Natural and Designed World
- Ethical Reasoning
- Understanding Societies and Institutions
- Writing in the First Year
- Writing-Intensive in the Major

Integrating Knowledge and Skills Through Experience is satisfied through co-op.

Program Requirement

133 total semester hours required

Plan of Study

Sample Plans of Study

FOUR YEARS, TWO CO-OPS IN SUMMER SECOND HALF/FALL

Year 1							
Fall	Hours	Spring	Hours	Summer 1	Hours	Summer 2	Hours
ACCT 1201		4 CS 2100 and CS 2101		5 MKTG 2201		4 MISM 2301	4
CS 1200 or BUSN 1102	1	CS 3200		4 ECON 1116		4 General Elective	4

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CS 1800 and CS 1802	5	ECON 1115	4				
CS 2000 and CS 2001	5	MATH 1341 or 1231	4				
ENGW 1111	4						
	19		17		8		8
Year 2							
Fall	Hours	Spring	Hours	Summer 1	Hours	Summer 2	Hours
ACCT 2301	4	CS 1210 or BUSN 1103	1	General Elective	4	Co-op	0
CS 3100 and CS 3101	5	CS 3000	4	General Elective	4		
FINA 2201	4	MGSC 2301	4				
General Elective	4	Business Concentration	4				
		Computing and Social Issues	4				
	17		17		8		0
Year 3							
Fall	Hours	Spring	Hours	Summer 1	Hours	Summer 2	Hours
Co-op	0	CS Required Elective	4	ENGW 3302, 3304, or 3315	4	Co-op	0
		Business Concentration	4	ORGB 3201 or 3203	4		
		Business Concentration	4				
		Khoury Elective	4				
	0		16		8		0
Year 4							
Fall	Hours	Spring	Hours				
Co-op	0	CS 4530 or 4535	4				
		STRT 4501	4				
		CS Required Elective	4				
		Business Concentration	4				
	0		16				

Total Hours: 134

FOUR YEARS, TWO CO-OPS IN SPRING/SUMMER FIRST HALF

Year 1							
Fall	Hours	Spring	Hours	Summer 1	Hours	Summer 2	Hours
ACCT 1201	4	CS 2100 and CS 2101	5	CS 3100 and CS 3101	5	General Elective	4
CS 1200 or BUSN 1102	1	CS 3200	4	ECON 1116	4	General Elective	4
CS 1800 and CS 1802	5	MATH 1341 or 1231	4				
CS 2000 and CS 2001	5	ECON 1115	4				
ENGW 1111	4						
	19		17		9		8
Year 2							
Fall	Hours	Spring	Hours	Summer 1	Hours	Summer 2	Hours
ACCT 2301	4	Co-op	0	Co-op	0	MGSC 2301	4
CS 1210 or BUSN 1103	1					General Elective	4
CS 3000	4						
General Elective	4						
MKTG 2201	4						
	17		0		0		8

